captions disappear when stations use digital video effects. One digital effect is to "squeeze" the captioned program into a smaller box for the purpose of simultaneously airing another type of programming - such as a newsbreak - next to the programming being shown. This digital mixing is often prepared so that the station can air the show's credits side by side with a preview of the subsequent program when the show ends. Careless engineering, however, sometimes results in the failure to reinstate the captions after the digital mixing is completed. The consequence is that segments of the program are aired without captions. The frustration experienced when captions suddenly disappear from a show in this manner is immeasurable.²⁵

Currently, individuals in the distribution chain through which the television signals must pass are not aware of the need to pass on the captions to the next link in the broadcast, cable, or direct satellite chain. This problem can easily be remedied by requiring individuals positioned at signal monitoring stations to monitor captions as they pass from a program's site of origination to local affiliates, cable providers, or other final destinations. These individuals should use caption decoders to ensure that the caption signals are being transmitted intact and that all equipment in the video path is set to pass line 21. With monitoring, errors in caption transmissions will be

²⁵ This is particularly frustrating when the captions disappear during the final segment of the program. One can imagine the disappointment of being drawn into the plot of a movie for an hour and forty-five minutes only to have the last fifteen minutes blocked from viewing.

corrected so that viewers receive the captions as originally intended.

7. Open-captioned character generated announcements, such as emergency warnings, weather advisories, names of officials, election results, sports updates, and school closings should not obstruct or be obstructed by closed captions. Unfortunately, to date, emergency crawls and closed captions typically use the same location - the bottom - of the television screen. The consequence is that viewers either miss important emergency information or have the captioning on their programs obstructed. The NAD is one of several organizations that has already submitted a formal petition to the Commission requesting a ruling that would require video providers to take the steps necessary to avoid any overlap of emergency crawls and closed captions. Once again we urge the Commission to act on that petition, or to incorporate the requested rules into the instant proceeding.

At least one broadcast network in the Washington, D.C. area - WRC-TV - already has resolved this problem with a new technology called the Television Online Biscreen Information, or the "TOBI" system. This method allows the closed captioning data encoded on line 21 of the vertical blanking interval to be recovered when a picture is squeezed into a box to provide room for an emergency crawl at the top of the television screen (Attachment F). That there already exists at least one solution to this problem provides ample reason for the Commission to direct its resolution by all networks and cable stations in its

final rules on captioning.26

8. Video programmers should not be permitted to air uncaptioned versions of a program where a captioned master tape of that program exists. Toward this end, all video programming should be labelled when it has been captioned. (e.g. with a simple symbol such as "cc"). In addition, it should be standard procedure for video programmers to verify the existence of captions so that the closed captioned master tape is used for broadcast or video duplication as the programming is passed around and among network and cable stations. This will help eliminate the many times that a program has already been shown with captions on one channel but is re-shown without the captions when aired by a second or third channel.

B. Consumer Input and Feedback

In promulgating its minimum standards, the Commission should work closely to receive the input of deaf and hard of hearing individuals and high quality captioning services who have had first hand experience with captioning. It is important to remember that many new captioning firms may be unfamiliar with prevailing captioning quality standards. Additionally, the Commission should conduct periodic reviews of its captioning standards on quality to ensure (1) that such standards are in fact providing full access to video programming through closed captions, and (2) that such standards are keeping abreast of

 $^{^{26}\,}$ A second alternative is to relocate the emergency crawls at the top of the screen.

current video programming technologies. In any and all of these periodic reviews, the Commission should seek ongoing feedback from consumers who make regular use of closed captioned programming.

C. Complaint Procedure

It is critical for the Commission to have a process by which consumers can bring their complaints regarding captioning to the Commission. Among other things, complaints might be brought to the Commission for poor captioning quality, captioning omissions, or problems caused by scrambler signals sent by cable TV operators. We propose that the Commission develop procedures to resolve, by final order, any complaint alleging a violation of the captioning mandates within 180 days after the date such complaint is filed.

In addition, education and training is needed for consumers who may be unfamiliar with the captioning rules, their right to file a formal complaint, and the proper avenues for presenting complaints. We propose that complaints be accepted in various formats, including letters, facsimiles, electronic mail, and videotapes provided in American Sign Language.

V. SUPPLY OF CLOSED CAPTIONING SERVICES

We have attached a list, prepared by the Technology
Assessment Program of the Gallaudet Research Institute and the
National Information Center on Deafness, of captioning service
providers in the United States as of February, 1995 (Attachment
G). According to the these sources, captioning services for all

types of video productions have proliferated over the past few years. In part, this is due to the passage of the Television Decoder Circuitry Act which increased the number of viewers who have televisions that display captions, and the Americans with Disabilities Act (ADA) which increased requirements for the captioning of videos by employers and places of public accommodation. The Telecommunications Act of 1996 is certain to cause an even greater proliferation of these services.

VI. FUNDING OF CLOSED CAPTIONING

The Commission is correct when it states that the federal government has played an important historical role in the funding of captioning. For example, the U.S. Department of Education has contributed significant funds directly to network broadcasters for the captioning of first-run syndicated programming. The purpose of these grants was to provide seed money to providers to encourage financial contributions from networks, producers, advertisers, and others in the private sector.²⁷ Insofar as the Telecommunications Act of 1996 now mandates captioning, video providers and owners will be soon be responsible for funding their own captioning. Because this will not occur overnight, we strongly support the continuation of current funding levels for captioning television programs during the period of transition when these responsibilities are shifted. After that time, we support redirecting federal monies that are still available to

²⁷ Attachment H details current funding awards for captioning by the U.S. Department of Education.

research for improved captioning technology, subsidies for programmers that can show undue burden²⁸, and seed money for the captioning of programs by low-budget programmers and video program owners.

VII. COSTS OF CLOSED CAPTIONING

There are a number of factors that go into determining the costs of captioning. The format, the length of the program, the nature of the captioning service desired (e.g., for a prerecorded vs. a live show), the turnaround time, and the payment schedule can all influence the cost of captioning. For example, captioning for off-line or pre-recorded programs is typically more expensive than is captioning for live shows because it requires additional staff for editing and proofreading the captions. The volume of captioning requested (substantial discounts are typically given for quantity) and the season in which the captions are needed (demand for captioning services are likely to be greater at the start of the television season) also may affect captioning prices. Additionally, providing a compatible disk of a program's transcript can reduce a caption vendor's charges. The National Center for Accessible Media reports that the cost of captioning a hour of pre-recorded (offline) national programming ranges from \$800 to \$1900, while the cost of captioning an hour of live (real-time) programming ranges

²⁸ See discussion on exemptions for undue burden discussed at pp 37-41, <u>infra</u>.

from \$300-\$1000.²⁹ These costs typically pale in comparison to the costs of producing video programming.³⁰ In any event, it should be remembered that the captioning industry is still in a state of flux. Greater demand for captioning over the past few years is increasing competition among captioning services, which in turn is bringing down captioning costs.

VIII. ROLE OF MARKET FORCES

The Commission has requested information about the extent to which market forces play a role in promoting the provision of closed captioning, and asks whether there are a sufficient number of decoder-equipped TV receivers in the market to provide the "hoped for incentive for the television industry to provide closed captioning." NOI at 13. There is no question that captioning makes good marketing sense. In 1991, Stephen Sigman, Director of Marketing of the Zenith Electronics Corporation expounded the benefits of providing captions as a "legitimate marketing opportunity" at the National Conference for the Closed Captioning of Local News. He explained that captioning provides

an opportunity for companies to satisfy very large legitimate and growing demands in a manner that not only makes that customer happy, but allows that company to make money, which is why that company exists. The opportunity for a broadcaster is to capitalize on that demand. To capitalize on not just the deaf, but also that huge hard of hearing population [of senior

²⁹ Attachment I provides a description of the processes used to caption videos and the terminology associated with these various processes.

For example, each Seinfeld episode costs approximately \$750,000. While not every television program will be this costly, generally budgets for video programming are quite substantial.

citizens] that is growing. Also that very large population of young children and . . . immigrants. . . If you are not closed captioning, then do it. All those people who can't watch TV will now watch you. . . And most importantly, offer the services and monitor the captions that are going out. So that someone in the studio will know if the hardware has failed, and the captions are going out garbled. The people who are interested in the captions, that huge audience, will appreciate that and they will watch your station, and not another guy with whom they have been having troubles. There is a payoff, and for the broadcaster it is viewers.

In the Washington, D.C. metropolitan area, the four major local television network affiliates also realized the benefits of providing captioning as a marketing tool when they decided to provide real-time captioning for all of their local news and weather. However, experience has shown that market forces alone are insufficient to promote universal captioning access. Although the percentage of programming that is captioned has increased over the past ten years, the video and television industry more often than not have considered captioning as an afterthought, and have failed to incorporate captioning costs into their overall operating budgets.

It is interesting to note that early attempts to obtain a requirement for mandatory captioning as many as six years ago were defeated with arguments that market forces alone would

This was made possible through the cooperative efforts of the TV For All (TVFA) Coalition, made up of approximately 30 local organizations (including NAD), and officials of the local TV stations. The stations realized that reaching an audience of 325,000 deaf and hard of hearing people, as well as individuals learning English as a second language, made good business sense. See Attachment J, the first two pages of a news release distributed by WRC-TV-Washington, D.C., announcing the introduction of real-time captioning for its local newscasts.

result in increased captioning. Specifically, in 1990, video providers insisted that a requirement for captioning would not be needed in the ADA because the Television Decoder Circuitry Act, by substantially augmenting the numbers of Americans who would receive closed captions, would provide sufficient incentive for networks to caption more programs.

It is true that since the Decoder Act went into effect, the number of Americans who have been able to receive closed captions through the decoder chip in their televisions has risen dramatically. The Electronics Industries Association (EIA) estimates that as many as 29 million new households purchase television sets equipped with decoders each year. But repeated assurances by the cable industry that there would be a concomitant growth in captioning have not been satisfactorily borne out. There has scarcely been an increase in the captioning of basic cable programming in all of this time.

Moreover, the ability to receive captions through newer technologies remains uncertain. Specifically, personal computers are now capable of being equipped with television receivers.

These "PCTVs" are hooked up to monitors that can display information received and processed through either the computer or television signals. The extent to which these apparatus will be required to receive and display closed captions is the subject of

 $^{^{32}}$ As a result, EIA estimates that all American households will have at least one captioned TV by the year 2000. NCAM Executive Summary at 7.

a petition for rulemaking pending before the Commission.³³ The petition requests the Commission to adopt a rule that will require all computer components with television reception capability - whether or not such components are sold as a personal computer or a plug-in circuit board - to be equipped with circuitry capable of decoding closed captions. The requested rule would go beyond the Commission's earlier interpretation requiring built-in decoder circuitry in a computer system which has the capability of receiving television signals only if it is sold with a monitor that has a viewable picture size of thirteen inches or larger. Because the goal of the Telecommunication Act's captioning provisions are ultimately to ensure that captions reach the largest audience possible, we once again urge the Commission to promulgate the regulation requested in the PCTV petition.

The Commission also has requested information about the extent to which television advertisers seek to market their products and services to individuals with hearing disabilities. It cannot be disputed that captioning is economically sound; the potential increase of 5 percent to 10 percent in market revenue can more than cover the costs of providing captions on commercial advertising. However, to date, surpisingly few commercials are closed captioned, although the numbers are on the rise, and much

³³ The petition, brought by the National Association of the Deaf, the National Center for Accessible Media, the National Center for Law and Deafness, Telecommunications for the Deaf, Inc., and VITAC, was filed at the end of 1995.

seems to be a matter of educating these advertisers about the benefits of reaching a larger audience. Some advertisers already have realized the benefits of either funding captions on television programs or of captioning their own commercials. For example, commercials that use deaf actors who sign while their script is open captioned have successfully drawn attention from both hearing and deaf viewers.

With respect to the Commission's inquiry about captioning in markets that reach smaller audiences, it does appear to be the case that providers in these smaller television markets are less likely to provide captioning. Reasons for this vary. First, smaller providers may be required to stretch their budgets to a greater extent than do providers in large urban areas. Additionally, deaf individuals in smaller towns may not have the grassroots network or support systems which, until now, have been critical to organizing efforts for the attainment of captioning access to local programming.

IX. IMPACT OF DIGITAL TELEVISION

Currently, closed captioning signals are transmitted by way of line 21 of the vertical blanking interval of the television broadcast signal. The Commission recognizes that the Television Decoder Circuitry Act requires steps to be taken to ensure the continuation of closed captioned television programming as new video technology, such as advanced television (ATV), is developed.

The Commission has asked whether it will be possible to

transmit over a digital signal closed captioning data that is encoded in programming intended for the current analog transmission system. The National Center for Accessible Media, part of WGBH's Caption Center, reports that while it is indeed possible to go from analog to digital transmissions and back again, transferring captions in this manner must be done with extreme care, or the captions will be lost. Others in the captioning services industry express a greater fear that captions will be lost during the transfer process.

Most importantly, it is essential that consideration be given to the provision of captions over ATV in the design of the equipment and systems that will be used to transmit ATV. To begin with, unless the hardware that is used to digitize video is designed with the carriage of captions in mind, digital TV could become inaccessible to caption transmissions. Were this to occur, engineers of digital equipment and systems would likely argue later on that retrofitting these systems for captions is too costly and burdensome. Similarly, the Commission must be explicit in setting aside spectrum that will solely be devoted to the transmission of closed captions over ATV.

Early negotiations with the ATV industry have acknowledged the need to set aside a minimal amount of bandwidth for closed captioning transmissions. However, issues remain with respect to the permanent allocation of sufficient bandwidth to take advantage of various new captioning technologies that can be used with SDTV and when it arrives, HDTV. We look upon the Commission

to ensure that both line 21 and sufficient ATV bandwidth are allocated to continue providing captions and to allow the use of the best possible technology for the widest range of consumer choice in captioning.

X. TRANSITION - TIMETABLES FOR CAPTIONING

The Commission has requested comment on appropriate timetables for providing captioning of video programming. The Telecommunications Act of 1996 directs the Commission to issue regulations implementing the caption mandates within 18 months of the Act's passage. We urge the Commission to complete its proceedings and to take final action on its rules long before that time.

The Act also states that the FCC's regulations must ensure that (1) video programming first published or exhibited after the effective date of the Commission's rules are fully accessible through closed captions and that (2) video providers and owners maximize the accessibility of video programming published or exhibited before that time through closed captions. Although the Act draws a distinction between programs published or exhibited before the effective date of the Commission's rules and those published or exhibited after that time, as a practical matter, this distinction should only be applied only with respect to the timetables by which captioning requirements will be implemented. It is the goal of Congress that video programming be fully accessible to and available for all Americans. Conf. Rep. No. 104-458, 104th Cong., 2d Sess. at 183-4. Accordingly, the target

for any set of timetables implemented by the Commission should be 100 percent captioning of all video programming, subject to the undue burden exemptions.

For individuals who rely on captioning, the failure to have complete freedom to choose their shows has amounted to a form of stringent censorship. Put simply, these individuals have been told what they can and cannot watch, whether or not it is what they would choose. Indeed, although the number of shows available to subscribers of video programming through cable, direct satellite, and other video services has continued to multiply, the number of shows actually available to caption viewers unfortunately has remained stagnant. A goal of 100 percent captioned programs will be necessary to achieve the type of full access to video programming which Congress envisioned in both the Television Decoder Circuitry Act and the Telecommunications Act.

Having stated this, however, we understand that because of the great numbers of programs that must be captioned, there may be a need to stagger some of the captioning requirements over a period of time. Accordingly, we propose the following:

First, all video programming which previously contained captions should be reformatted, if necessary, and displayed with captions whenever aired after the effective date of the Commission's regulations. As noted above, all too often, programs which have already been captioned are later edited or compressed, at which time the captions are thrown out of sync

with the programs' visual display. Only a minimal amount of notice should be needed to ensure the proper reformatting of these programs.

Second, the Commission should require premium cable stations to caption 100 percent of their programs (whether published or exhibited before or after the effective date of the Commission's rules) within 90 days of the effective date of those rules.

These stations are well-funded and viewers, including those who use closed captions, pay a substantial monthly fee to these stations for what should be unrestricted and uncensored viewing opportunities. While a portion of the programs on premium cable stations are, in fact, captioned, deaf and hard of hearing viewers are still limited in terms of having full access to programs on these channels.

With respect to the remainder of programs that are first published or exhibited after the effective date of the FCC's captioning rules, we propose that the Commission develop a set of timetables that will begin to require captioning within six months after the effective date of those rules. Timetables for captioning can thereafter depend on the size of the video programmer/owner (larger programmers and owners should be subject to the captioning rules more quickly), the type of program (news, current affairs, and children's educational programming should take priority), and the airing time for the program (except for children's programming, captioning of prime time shows should occur before captioning in other time slots). Captioning of all

such new programming (not subject to the undue burden exemptions) should be required within a period of two years after the effective date of the Commission's rules.

Finally, we propose that the Commission develop a schedule which requires captioning on video programming published or exhibited <u>before</u> the effective date of the Commission's rules which follows the same priorities set forth for new programming. However, we understand that the volume of such programming may necessitate additional time to fully comply with a goal of 100 percent accessibility through closed captions. To accommodate the extra time needed, we propose that all such earlier programming (not subject to the undue burden exemptions) be captioned within a three to five year period after the effective date of the Commission's rules.

XI. EXEMPTIONS

The Commission has sought guidance on the appropriate balance that should be struck between mandating captioning and the costs imposed by such mandatory requirements. We wish to emphasize at the outset that, while NAD recognizes the need for certain exemptions, any captioning exemptions should be extremely narrowly construed. Given the generally high costs for producing video programming (which often includes expensive special effects), the failure to incorporate captioning costs into the overall production budget amounts to discrimination and should not be permitted.

The Telecommunications Act of 1996, passed after the NOI was

issued, does provides considerable guidance on the issue of exemptions. 47 U.S.C. §713(d). The captioning provisions of that Act set out three possible exemptions for video providers or owners: First, the Commission

may exempt by regulation programs, classes of programs, or services for which the Commission has determined that the provision of closed captioning would be economically burdensome to the provider or owner of such programming.

47 U.S.C. §713(d)(1).

The Conference Report accompanying the Telecommunications
Act directs the Commission to make the above determination by
considering several factors, which for the most part will result
in balancing the costs of providing closed captions against the
overall resources of the video provider or owner. Conf. Rep. No.
104-458, 104th Cong., 2d Sess. (1996) at 183.

It is important for the Commission to understand that deaf and hard of hearing individuals seek access to virtually all classes of video programming. As is true for the general population, there is no one category of programs which these individuals should not be capable of viewing with captions.

Indeed, it would be unthinkable to eliminate sound, for example, on all situation comedies. Perhaps if one considers the consequences of taking such action, one can better understand the absurdity of exempting as a whole an entire category of programming from the captioning requirements.

In the past, some video providers have argued in favor of a blanket exemption for locally and community produced programming

and for programming produced by non-profit entities. But even locally produced programming is being captioned at an increasing rate, and some not-for-profit entities such as National Geographic have the financial resources to make their high quality programming accessible through closed captioning.

Moreover, cities and community colleges have a double obligation to caption programs, such as legislative hearings and televised college courses, under Title II of the ADA.³⁴ For all of these reasons, the Commission should very narrowly construe this exemption provision.

Second, the Telecommunications Act allows an exemption from the closed captioning requirements to a provider or owner of video programming "if such action would be inconsistent with contracts in effect on the date of enactment of the Telecommunications Act of 1996." 47 U.S.C. §713(d)(2). Original negotiations with the cable industry resulted in inclusion of this exemption for a single and very specific purpose. The inclusion of the term "inconsistent with contracts" was intended to be limited to the situation where syndicated programs had been distributed to licensees without captions prior to the date on which parties would have notice about the new captioning requirements - in this instance February 8, 1996, the date on

For example, the Rhode Island Association of the Deaf successfully sued its state for the failure to make its televised legislative process (and other televised state services) accessible through closed captioning. A new task force, established by an Executive Order of Rhode Island's Governor, is now working with a captioning agency to provide access to those proceedings.

which the Telecommunications Act became law. The contracts referred to in this subsection are typically for three to five years duration; after these contracts lapse this exemption should become moot. Although it was not intended that these syndicated programs already in the licensee's library be shipped back to the copyright owner for captioning, it was intended that nothing in this section should otherwise be construed to relieve a video provider or owner of its obligations to provide the captioning services required by the Telecommunications Act.

Finally, the Telecommunications Act allows a provider or owner of video programming to petition the Commission for an exemption from the captioning requirements if such provider can prove that complying with those mandates would result in an undue 47 U.S.C. §713(d)(3). The Act goes on to define undue burden in an manner that is analogous to the statutory definition of "undue hardship" in Section 101(10) of the ADA, covering employment discrimination, and 28 C.F.R. §36.104, the Department of Justice's regulation covering discrimination by places of public accommodation. As is true for these sections, subsection 713(d)(3) of the Telecommunications Act defines undue burden as "significant difficulty or expense." Also as is true for exemptions under the ADA, the Commission, in making an undue burden determination, should take into account the overall financial resources of the video program provider or owner, rather than the cost of captioning a particular program vis-a-vis the cost of creating that individual production. For example,

channels which show old movies may have small production costs for those particular movies, but considerably larger overall financial resources. Similarly, the Commission should consider the fiscal and administrative relationship between the provider and program owner; where there are strong fiscal or administrative ties between the two, the resources of both entities should be considered before granting an undue burden exemption. Finally, any and all undue burden exemptions should be restricted to a specific time period, e.g. one year.

XII. CONCLUSION

On February 8, 1996, President Clinton signed the Telecommunications Act of 1996 into law. For the first time in our nation's history, that law mandates the provision full access to video programming through closed captioning. The Conference Report accompanying this Act states that it is "the goal of the House to ensure that all Americans ultimately have access to video services and programs, particularly as video programming becomes an increasingly important part of the home, school, and workplace." Conf. Rep. No. 104-458, 104th Cong., 2d Sess. (1996) at 183-4 (emphasis added).

Historically, deaf and hard of hearing people have been excluded from full access to the telephone, radio, and broadcast/cable television mediums. Without question, the lack of full access to these information mediums has had profound effects on the way that these persons live and has adversely impacted the overall quality and productivity of their lives.

The Telecommunications Act of 1996 brings us to a crossroad in telecommunications policy, with new promises to finally change the way our country provides telecommunications products and services. It is of utmost importance that the United States seize this opportunity to reverse the historic trend of exclusion, by becoming a world leader in requiring full access to video programming. Only full and seamless access will enable deaf and hard of hearing individuals to successfully compete and participate in the global economy.

We thank the Commission for initiating this Notice of Inquiry as the first step toward providing full access to video programming for individuals with hearing and vision disabilities. We urge the Commission to complete this proceeding and to issue its final rules on captioning in an expedited fashion.

Respectfully submitted,

Haur letty Harris

Karen Peltz Strauss

Legal Counsel for Telecommunications Policy

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March 15, 1996

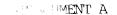
Before the FEDERAL COMMUNICATIONS COMMISSION Washington, D.C. 20554

In the Matter of)
Closed Captioning and Video) CC Docket No. 95-17
Description of Video)
Programming)

COMMENTS OF

THE NATIONAL ASSOCIATION OF THE DEAF

ATTACHMENTS





Nearly 100 Million Americans Can Benefit from Watching Captioned TV

Over the years, NCI research has shown that many people can benefit from watching captioned TV. These audiences include: people who are deaf or hard of hearing; those learning English as a second language;

young children learning to read; remedial readers; and illiterate adults. Today, the potential U.S. audience for captioned television is estimated at nearly 100,000,000.

Audiences that can benefit from captioned TV:

24 Million Deaf & Hard-of-Hearing People

Source: Gallaudet University

 of this group, 14 million people have a loss that affects their ability to enjoy television

Source: NCI Market Facts Study

3.7 Million Remedial Readers

Source: U.S. Department of Education

■ figure based on Compensatory Education Program targeted at students (K-12) who received scores below 50% on standardized tests

27 Million Illiterate Adults

Source: U.S. Department of Education

- 56% are under the age of 50
- 41% live in metropolitan areas. 8% in rural areas

12 Million Young Children Learning to Read

Source: U.S. Department of Education

- .6 million children in Head Start
- 3.7 million kindergartners
- 3.9 million 1st graders
- 3.8 million 2nd graders

30 Million for Whom English is a Second Language

Source: National Captioning Institute Estimated from U.S. Census Bureau Data

- of the above, 7.7 million Hispanics who speak only Spanish
- of the above, 3 million Asians who speak only their native language
- 1.6 million Hispanics and Asians in adult education

Source: U.S. Department of Education





Internet: mail@ncicap.org

Caption Vision ©

A Guide To Increasing TV Sales

Nationwide Campaign Launched to Market "CaptionVision©"

The Electronic Industries Association (EIA) has launched a nationwide advertising and publicity campaign to promote the benefits of "CaptionVision(CC)" to consumers. In anticipation of July 1, 1993, when all televisions 13" and larger manufactured for sale in the U.S. will require built-in captioning decoder circuitry, the EIA is assisting retailers in marketing this new television feature through the following activities:

- Endorsements of "CaptionVision(CC)" from various consumer and special interest groups will appear in their member publications and the general media.
- The EIA will host a press briefing and booth at the International Summer
 Consumer Electronics Show to publicize
 "CaptionVision(CC)". Informational materials will be distributed at other industry trade shows.
- Television manufacturers will conduct "CaptionVision(CC)" marketing briefings for sales representatives and retailers.

• Finally, in addition to this newsletter about "CaptionVision(CCV" eve-catching point of purchase displays will be available free to retailers throughout the country.

YOUR KID'S NEW READING TUTOR JUST ARRIVED



Inside every new television set with a 13-inch or larger screen is an amazing new electronic viewing device sure to increase your retail sales.

It's called CaptionVision [23], and it lets new television buyers across America enjoy the benefits of closed caption programming via built-in circuitry that works like an external adapter box.

CaptionVision can improve a child's reading skills through word association while he or she watches a favorite program.

It can speed up the process of learning English for non-English speaking individuals in the privacy and comfort of their homes. It can help armichair athletes catch every

(can neigh armentar authers cauch every play-by-play description in even the noisiest surroundings. (Like when all the relatives, including loud Uncle Leo. show up for dinner during the big game.)

It can entertain and keep a night owl company without disturbing others.

uches a favorite program. Quite frankly, this unique technical

(a) This message is brought to you by Electronic Industries Association

capability built into new televisions is wide open to scores of useful and fun purposes. It will literally change the way people look at and use their television sets in the years ahead.

So remember to tell your customers about CaptionVision 2. You'll open unlimited viewing possibilities for them. And possibly close a sale at the capte time.

The New Way To Watch TV

"CaptionVision " Is for Everyone!

It may not seem obvious, but just about everybody can benefit from watching captioned programs on a television with "CaptionVision(CC)". Here are some examples:

Children Learning to Read — A number of studies conducted using captioned television in the classroom have indicated significant improvement in students' reading skills. Not only do they learn better spelling, comprehension and punctuation — but their TV watching time becomes a learning time as well.

Imagine the educational potential of children who spend as much time learning as they do watching TV!

Low-literate Adults — Captioned television offers adults the same learning mechanism and benefits as children. Additionally, "CaptionVision(CC)" allows them to learn to read in a convenient and private environment from TV programs adults enjoy, instead of children's programs.

Sports Fans – Now the scores and commentary accompanying sporting events

can be enjoyed in very noisy environments (like airport bars) with "CaptionVision(CC)".

English-as-a-Second-Language
Students — Immigrants from all over the world can enjoy American TV programming and improve their English language skills by watching "CaptionVision(CC)".

Night Owls — Late night television viewers will never need to worry about keeping the whole house awake with "CaptionVision(CC)".

CaptionVision 27 is designated as "CaptionVision(CC)" in the text of this newsletter only. The name adopted by the Electronic Industries association and TV manufacturers for all caption decoder circuity in televisions is. CaptionVision 27.

Closed Captions Are Great For:

- ✓ Deaf or hard-of-hearing viewers
- ✓ Children learning to read
- ✓ Anyone learning English
- ✓ TV Viewing in a noisy room
- ✓ Late night TV enjoyment without disturbing others

Visit your Zenith dealer for a demonstration today.

AATTACHMENT 5

Zenith closed captions are larger, sharper and easier to read than those produced by separate set-top decoders. And, Zenith's caption decoding is built right in so there's no need for that set-top box or its hookup.

When broadcast, the Zenith system can display captions anywhere on the screen, upper and lower case letters, colored characters, reverse captions (dark on light) for italic emphasis, and a second caption channel.

Form No. T1056C-991 Printed in U.S.A.

ask to see a Zenith.

Zenith Electronics Corporation 1000 Milwaukee Avenue Glenview, IL 60025-2493



RE II- NOETH SOLATER TO SPECIFICATION OF THE SOLATER AND SOLATER AND SPECIFICATION OF THE SPICE AND SPICE



Introducing



CLOSED CAPTION TV

